

OTPE

RAW SEQUENCE LISTING PATENT APPLICATION: US/09/939,408A

3 <110> APPLICANT: Yoshida, Roberta Kootstra, Anna

Using Same

DATE: 01/23/2002 TIME: 17:03:26

Input Set : A:\500nscseq.txt

Output Set: N:\CRF3\01232002\1939408A.raw

7 <120> TITLE OF INVENTION: Phenylalanine Ammonia Lyase Polypeptide and Polynucleotide Sequences and Methods of Obtaining and

Does No Compr Corrected Discretty idea

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11 <130> FILE REFERENCE: 29479/500NSCA
    13 <140> CURRENT APPLICATION NUMBER: US 09/939,408A
    17 <141> CURRENT FILING DATE: 2001-08-24
    19 <150> PRIOR APPLICATION NUMBER: US 09/624,693
    22 <151> PRIOR FILING DATE: 2000-07-24
    23 <150> PRIOR APPLICATION NUMBER: PCT/US01/23270
    26 <151> PRIOR FILING DATE: 2001-07-24
    29 <160> NUMBER OF SEQ ID NOS: 30
     31 <170> SOFTWARE: PatentIn Ver. 2.0
ERRORED SEQUENCES
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     1708 <212> TYPE: PRT
     1709 <213> ORGANISM: Artificial Sequence
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     1713 <222> LOCATION: (12)..(719)
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position
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w--> 1721
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              1
             Xaa Asn Gly Xaa His Ala Ala Xaa Xaa Ala Ser Xaa Xaa Xaa Xaa Xaa
w--> 1724
                                                                   30
                                               25
     1725
                          20
             Xaa Xaa Xaa Ala Xaa Ala Gly Ser Xaa Leu Pro Thr Thr Xaa Xaa
w--> 1727
     1728
             Thr Gln Leu Asp Ile Val Glu Xaa Xaa Leu Ala Asp Pro Xaa Thr Asp
W--> 1730
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                  50
     1731
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w--> 1733
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     1734
```

Gly Ala Ala Arg Lys Gly Arg Xaa Val Arg Val Xaa Asp Ser Asp Glu

85

90

65

W--> 1736

W--> 1738

1737

/_ Ile Arg Xaa Lys

malou

100

E--> 1739

105

110

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				Outp	ut S	et:	14: /c	112 -	,							- 1 -	3 an	
w> 1	7 4 1	Xaa	Asn	Ser	Va1	Tyr	Gly	Val	Thr	Thr	Gly	Phe	Gly	Gly 125	Ser	Ala	nsp	
	742			110	clu	Asn	Ala	Ile	Ser	Leu	Gln	Lys	Ala	Leu	Беа	01-		
1	744	Thr	AIG	1111	0			135					Cor	Dhe	Xaa	Leu	Gly	
1	745		130	Cys	c1v	va1	Leu	Pro	Thr	Sei	: Xaa	Asp	Ser	FIIC	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		160	
W> 1	747	Gln	Leu	. Ten	GLY	• • • •	150					155	17.0.3	A ro	Gly	Ala	Met	
1	748	145			c1.	h e n	ser	Leu	Pro	Let	ı Glu	vai	Val	Mry	011	175		
1	750	Arg	Gly	Leu	GIU	165					170		_	1 -	val	Arc	Leu	ı
1	751			_	170 1	Acn	Ser	Leu	Th:	r Ar	g Glj	His	ser	ATO	190)		
	753	Thr	11€	Arg	Val	ASI				18	5				. 11	, Thi	- Pro)
	L754			Leu	180	7 7 7	TAI	Tid	r As	n Ph	e Le	ı Asr	His	5 G1	y 111	2 111.		
	1756	Val	Va)	Leu	Glu	A d	neu		20	0				20			r Dri	7
	1757			195	•			. Th	r II	e Se	r Al	a Sei	r Gl	y As	р ге	u se.		-
	1759	116	va.	195 1 Pro	Leu	Arg	1 (1)	21	5	-			22	0			- 1/2	1
	1760		210	0			. 1	- 21	э т1	e Th	r Gl	y Hi	s Pr	o As	p Se	r Ly	s va	U
	1762	Let	ı se	pro 0 r Tyl	r Ile	Ala	A Ale	1 AL	a 11			23	5				- 23	-
	1763	225	5				231) •••-	- 61	11 T.3	s T1	e Me	t Xa	a Al	a Ar	g G1	u Al	a
w>		His	s Va	r Tyr 1 Xaa	a Hi	3 G1	u Gl	у ха	a Gi	u D	25	0				25	5	
W>	1766			a Le		24	5		0	co Va	al Va	ıl Le	u Gl	у Рі	:0 L	rs Gl	u Gi	- У
	1768	т1.	e Al	a Le	u Ph	e Gl	у Le	u Gi	u P	21	65				27	70		
				a Le Ly Le	26	0				1 o M	o 3 o 1 S 6	r Al	a Se	er Me	et A	la Th	ir Le	eu
	1769	TΘ	n G1	v Le	u Va	l As	n Gl	y T1	ır a	Ia V	uı o			21	85			
	1771	1,0		27	5					0 U	or I	an T.6	an Se	er G	ln A	la L	eu Ti	nr
	1772	n 1	a Le	Ly Le 27 eu Hi	s As	p Al	a Hi	s M	et L	eu 5	er n	- u	31	0.0				
	1774	27.1	20	eu H1 90 eu Th				2	95		1 U	ic A	la G	ly S	er P	he H	is P	ro
	1775	λ1	a Le	en Th	ır Va	1 G1	Lu Ai	la M	et V	ar 6	TA D	3	15	-			3	20
	1777	3.0	35	eu Tr			3.	10			ii a D	ro T	hr G	ln I	le G	lu V	al A	la
	1778	D)	oo T.	en H	is As	sp Va	al T	hr A	rg F	ro i	112 L	30				3	35	
	1780	PI	ie n	cu		3	25					30 V	aa P	he P	la V	al H	is H	is
	1781		1	eu H	le A	rq T	hr L	eu I	eu (;lu (31Y 2	er v			3	350		
M>	1783	A.	ıy n	sn I.	3	40					345	·1 C	11 v 1	le I	eu I	arg (iln P	sp
	1784		1 0	10 G	1n V	al L	ys V	al I	ys i	Asp	ASP (JLU G	ir) v		365			
	1786	G	Iu c	3	55					360		T T	011 (21 v 1	Pro :	Leu 1	/al 9	3er
	1787	_		ilu G 3 Tyr P	ro L	eu A	rg I	hr s	ser	Pro	GIn '	rtb r	Jeu (380				
	1789	A	rg 1	171 F			-		375			a 1		2111	Ala ·	Gly '	Gln :	ser
	1790		1	ryr P 370 Met I	10 F	is A	la E	lis .	Ala	Val	Leu	ser i	105	J_U_		-		400
	1792	P	sp i	Thr A	.10 1		3	390			_	:	222	Tvc	Xaa	Thr	His	His
	1793	3	885	mb = 1	on 7	sn I	ero l	Leu	Ile	Asp	Val	GIU A	MSH	L13			415	
W	> 1795	'1	inr	Thr A	Joh .		405					410		mhr	Met	Glu	Lys	Thr
	1796		_	a1	san I	ohe (Gln .	Ala	Ser	Ala	Val	Xaa	Asn	TIII	rice	430	-	
W	> 1798	(Gly	GIY A	4511	120					425			Dho	Thr	G1n	Leu	Thr
	1799			Leu .		[[]]	Ala	Leu	Ile	Gly	Lys	Leu	ASN	Pile	115			
	1801		Arg	Leu .	M14	Leu				440				Dro	cor	Cvs	Leu	Ala
	1802			Leu Met	4.50	N an	Δla	G1v	Met	Asn	Arg	Gly	Leu	PLO	261	010		
	1804		Glu	Met	ьeu	nou			455					400	T 011	a en	Tle	Ala
	1805	,		450			cor	Len	ser	Tyr	His	Cys	Lys	GIY	Leu	пор		480
	1807	,	Ala	Glu	ASP	PLO	Ser	470	-	-			475			Dro	Va1	Thr
	1808	3	465	Glu			mhr	Cor	G1u	Leu	Gly	His	Leu	Ala	Asn	PIO	195	
	1810)	Ala	Ala	Ala	Tyr	THE	Jer	0,14			490				1 0-	Car	Leu
	1811			His			480	110	Glu	Met	: Gly	Asn	Gln	Ala	Val	asn	Ser	200
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	101																	

DATE: 01/23/2002 TIME: 17:03:26 RAW SEQUENCE LISTING PATENT APPLICATION: US/09/939,408A Input Set : A:\500nscseq.txt Output Set: N:\CRF3\01232002\1939408A.raw 510 Ala Leu Ile Ser Ala Arg Arg Thr Ala Glu Ala Asn Asp Val Leu Ser Leu Leu Leu Ala Thr His Leu Tyr Cys Val Leu Gln Ala Val Asp Leu

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2.0-	Ala Leu IIe Ser Ala Arg 43 520 515 510 540 Leu Gln Ala Val Asp Leu 540 Leu Leu Leu Ala Thr His Leu Tyr Cys Val Leu Gln Ala Val Asp Leu 540 540 540 540 540 540 540 540 540 540
1817	Tou Leu Ala Thr His Leu 191 010 540
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1820	Leu Leu Ala Thr His Leu 17 5 540 540 550 550 550 555 555 555 555 5
> 1822	Arg Ala Met Glu Phe Glu Phe Glu Fe F 555 550 550 575 575 575 576 576 576 576 576 576 576
1823	570 Teu Xaa Gln His Phe Gly Add 570
v> 1825	Xaa Leu Leu Xaa Gln His Fie S-7 570 570 550 555 550 Xaa Xaa Glu Leu Xaa Lys Val Xaa Lys Xaa Leu Xaa Lys Arg Leu Saa Xaa Glu Leu Xaa Xaa Lys Val Xaa Lys Xaa Leu Xaa Lys Arg Leu Xaa Xaa See See See Arg Trp His Asp Ala Phe
1826	Van Clu Leu Xaa Xaa Lys Val Add 1 595
W> 1828	Xaa Xaa UZU 586 Tan Clu Pro Arg Trp His Asp Ala 1100
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1831	GIU GIII Xaa Leu Ser Ser Xaa Xaa Xaa
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1835	Ser Xaa Ala Thr Gly Thr val val 640 660 660 660 660 660 660 660 660 660
W> 1837	Xaa xaa var 630
1838	Xaa Xaa Val Ser Leu Ala Ala Val 635 625 Glu Lys Ala Ile Ser Leu Thr Arg Xaa Val Arg Xaa Xaa Phe Trp Xaa 650 650 645 645 650 647 648 650 650 650
W> 1840	Glu Lys Ald 645
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W> 1843	Ala Pro Ser Ser Ser Ser Fro Art G65 660 Arg Val Leu Tyr Ser Phe Val Arg Glu Glu Leu Gly Val Lys Ala Arg 665 680 680 680 680 680 680 680
1844	Tel Ten Tyr Ser Phe Val Arg Glu 055 685
1846	Arg Gly Asp Val Phe Leu Gly Lys Gln Glu Val Thr Ile Gly Ser Asn 695 Arg Gly Asp Val Phe Leu Gly Lys Gln Glu Val Thr Ile Gly Ser Asn 700 695 Arg Gly Asp Val Phe Leu Gly Lys Gln Glu Val Thr Ile Gly Ser Asn 700
1847	alu Asp Val Phe Leu Gly Lys Gill 700 700
1849	Arg Gly Asp Val Phe Let Gly 575 700 700 695 695 720 Val Ser Arg Ile Tyr Glu Ala Ile Lys Ser Gly Arg Ile Asn Xaa Val 720 715
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192	6 <223> OTHER INITIAL
₩> 192	7 (220) 1211-
192	8 <221 NOTE (2008) . (2586)
192	9 <222> LOCATION:
107	20 /223> OTHER 1810
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193	11 (220) FARME/KEY: eXON 32 (221) NAME/KEY: eXON 33 (222) LOCATION: (1822)(1947)
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                  15 inser / dum (- acc aac ggc tcg c

16 17 Inser / dum (- acc aac ggc tcg c

Thr Asn Gly Ser His Ala Ala Pro Thr Lys Ser Ala Ala Sly Pro Thr
          1984
          1985
     E--> 1986
```

w--> 1987

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DATE: 01/23/2002 TIME: 17:03:26

	Output Set: N: (Chiz V:	
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	20 25 gc cac gc gcg cac gag cac cag l4	
1988 1989	tog get etc ege ege acg ecc gge con Asp Gly His Ala Ala His Gin	
1990	tog got ete ege ege aeg eee gge ete gat gge eae geev gee Ser Ala Leu Arg Arg Thr Pro Gly Leu Asp Gly His Ala Ala His Gin Ser Ala Leu Arg Arg Thr Pro Gly Leu Asp Gly His Ala Ala His Gin	92
	ser Ala Leu Arg Alg III 40 40 55 tcg cag ctc gtg cag gag ctc ctc agc gac ccc acc gac gac ls tcg cag ctc gtg rle Val Gln Glu Leu Leu Ser Asp Pro Thr Asp Asp	
W> 1991	tog cag etc gag atc gtg cag gag tou Leu Ser Asp Pro Thr Asp Asp	
1992	35 tcg cag ctc gag atc gtg cag gag ctc ctc agc gac ctc ser ser Ser Gln Leu Glu Ile Val Gln Glu Leu Leu Ser Asp Pro Thr Asp Asp Ser Gln Leu Glu Ile Val Gln Glu Leu Leu Ser Asp Pro Thr Asp Asp Ser Gln Leu Glu Ile Val Gln Glu Leu Leu Ser Asp Pro Thr Asp Asp Ser Gln Leu Glu Ile Val Gln Glu Leu Leu Ser Asp Pro Thr Asp Asp Ser Gln Leu Glu Ile Val Gln Glu Leu Leu Ser Asp Pro Thr Asp Asp	40
1993	ser Gln Leu Glu Tie val 55 50 gto gto gag gag tac agc ctc acc gtc cgt gac gtt gtc ggc 2 gtc gtc gag ctc agc ggg tac agc ctc acc gtc cgt gac gtt gtc ggg gt gtc gag ctc agc ggg tac agc ctc acc gtc cgt gac gtt gtc ggc gt gag	•
W> 1994	ate ate gag etc age ggg tac age etc aby Thr Val Arg Asp Val Val Giy	
1995	50 50 50 51 52 53 54 55 55 56 57 57 58 58 58 58 58 58 58 58 58 58 58 58 58	88
1996	val val Glu Leu Set 17 75 75 65 970 970 970 970 970 970 970 970 970 970	.00
W> 1997	age age agg agg agg agg agg agg agg agg	
1998	65 gcc gcc cgc aag ggg cgc agg gtc cgc gtc cag aac gac gac gcc gcc gcc gcc gcc gc	336
1999	85 tc ctc aag gcc cag ctt cag	,,,,
W> 2000	Ala Ala Arg Lys Gly my 90 90 85 egg gca cag ctt cag 35 cgc gca cgc gtc gac aag ag gtc gac ttc ctc aag gcc cag ctt cag 36 cgc gca cgc gtc gac aag ag gtc gac ttc ctc aag gcc cag ctt cag 37 cgc gca cgc gtc gac aag ag gtc gac ttc ctc aag gcc cag ctt cag 37 cgc gca cgc gtc gac ag gcg gca cgc gtc gac ag gcg gca cgc gtc gac ag gcg gca cgc gcc gca gcg gca cgc gcc gc	
2001		381
2002	100 100 ac tog gtc tac gga gtc acc acg g tgcgttccga gacgagaggc act tog gtc tac gga gtc arc acg s tgcgttccga gacgagaggc	30 L
W> 2003	tog gtc tac gga gtc acc acg g tgcgttccga ;	
2004	aac tog gto tac 994 90- Asn Ser Val Tyr Gly Val Thr Thr 120	441
2005	Asn Ser Val Tyr Gly Val III 115 115 115 116 117 118 119 119 119 119 119 119 119	489
W> 2006	ggaaatctog ggatgccqca gcgctgaacg ctgacactcg cttggacugu cyon ggaaatctcg ggatgccqca gcgctcg gcc aca acg acg act gar gca gca ctc ttgcagg gt ttc ggt ggc tcg gcc gac acg aga act gar gca yca ttgcagg gt ttc ggt ggc tcg hla Asp Thr Arg Thr Glu Asp Ala Val	400
2007	ggadacteeg st ttc ggt ggc tcg gcc gac acg dy dy Thr Glu Asp Ala Val	
2008	ggaaatctcg ggatgece ee gec gac acg agg act yay gec gt ttgcagg gt ttc ggt ggc tcc gcc gac acg agg act yay gcc gt ttgcagg gt ttc ggt ggc tcc gac acg agg act yay gcc gcc gac acg agg act yay gcc gcc gac acg acg acg acg acg acg acg	537
2009		53/
W> 2010	ato can any gog ctc atc gag cac cay ctc cys Gly Val Thr Pro	
2011	ago oto cag aag gog oto ato gag cao cag oto tgo gge geg ago sa fac gag cao cag cao cao cao cao cag cao	505
2012	ser Leu Gin Lys Aia 140 140 135 acg tc gtc tcg tcc ttc agc gtc gga cgc ctc gag aac acg ctt acg tcc gtc tcg tcc ttc agc gtc gga cgc gcc tcg gag aac acg ctt acg tcc gtc tcg tcc ttc agc gtc gga cgc gcc tcg gag aac acg ctt	585
W> 2013	acg tcc gtc tcg tcc ttc agc gtc gga cgc ggc ctc gag ac ac gga cgc ggc gtc ac gga ac ac gga cgc gga cgc gga ac ac gga cgc gga gga	
2014	acg tec get ser Ser Phe Ser Val Gly Arg Gry Lea 165	633
2015	Thr Sel var 155	633
W> 2016	Thr Ser Val Ser Ser 155 155 ccg ctc gag gtc ttc cgc gcg cgc atg gtc atc cgc gtc aac tcg ctc ccg ctc gag gtc ttc cgc gcg gcc atg gtc atc cgc gtc Asn Ser Leu 180 180 180	
2017	ccg ctc gag gtc gtc cgc ggc gcc atg gtc atc cgc gtc atc sep gtc atc cgc gtc atc sep gtc atc cgc gtc atc atc cgc gtc atc atc cgc gtc atc atc atc atc atc atc atc atc atc a	681
2018	pro Leu Gia 170 175	981
W> 2019	Pro Leu Glu Val Val ar 175 176 acg cgt ggc cac tcg gcc gtc cgc ctc gtc ctt gag gcg ctc acc acg cgt ggc cac tcg gcc gtc cgc ctc gtc ctt gag gcg ctc acc Thr Arg Gly His Ser Ala Val Arg Leu Val Val Leu Glu Ala Leu Thr Thr Arg Gly His Ser Ala Val Pro Leu Val Val Leu Glu Ala Leu Thr	
2020	acg cyc 990 His Ser Ala Val Arg Leu Val Val 195	729
2021	The Mig Sal	129
W> 2022	Thr Arg Gly His Set and 190 185 aac ttc ttg aac cac cgc atc acc ccc atc gc ggc tcc aac ttc ttg aac cac cgc atc acc gcc atc gtc ccc tc gc ggc tcc	
2023	act tt ttg acc cac cgc atc acg ccc atc gtc ccc ctc cgc 99 99 acc atc atc ttg acc cac ctc ttg acc cac cgc atc acg ccc atc gtc ccc ctc cgc 99 99 acc atc atc acc atc acc atc acc atc acc ac	227
2024	Ash Phe Dec 205	777
W> 2025		
2026	atc cog gos Ala Ser Gly Asp Leu Ser Pro Leu Ser 230	025
2027	7 Ile Ser Ala Ser Gly Advances 220 225 226 227 228 248 249 245 245	825
W> 2028	215 at acc acc ggt cac ccc gaz gtc aag gtt cac gtt ttg cac gas gas atc acc acc ggt cac ccc gaz gtc aag gtt cac gtt ttg cac gas atc acc ggt cac ccc gaz gtc aag gtt cac gtt ttg cac gas atc acc ggt cac ggt cac gtc aag gtt cac gtt ttg cac gas atc acc ggt cac gas gtt cac gtt ttg cac gas atc acc gas gas gtt cac gtt ttg cac gas gtt cac gas atc acc gas gtt cac gtt ttg cac gas gtt cac gtt ttg cac gas gtt cac gas gtt cac gtt ttg cac gas gtt cac gas gtt cac gtt ttg cac	
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2030	11e Thr Gly His Pro asp 240 235 235 236 240 240 240 240 241 240 240 240 240 240 240 240 240 240 240	873
W> 203	2 gag aag atc atg ttt geg ege gag gee atc teg etc tt gyt een Gly Eeu Glu 3 Glu Lys 11e Met Phe Ala Arg Glu Ala 11e Ser Leu Phe Gly Eeu Glu 255 255 255 255 255 255 255 255 255 255	
203	2 gag aag atc Met Phe Ala Arg Glu Ala 11e Ser 260	0.20
203	3 GIU Lys 110 Mcc 255 255 attragagagt ctcccagttt	930
W> 203	Glu Lys Ile Met Park Art 125 255 256 45 45 9ca gtc g gtacgtcgcg agtcctgact gcagtgagct gttcgagagt ctcccagttt	
203	5 gca gtc y gcuss-sy	
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RAW SEQUENCE LISTING

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DATE: 01/23/2002 TIME: 17:03:26

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v>	2040	ggt ctg gtc aac gga acg gcc gtc tcc gcc tcg atg gcg acc ctc agt ggt ctg gtc aac gga acg gcc ttc gcc tcg atg gcg acc ctc agt ggt ctg gtc aac gga acg gcc ttc gcc agt 280 280 280 280 280 280 280 28
	2041	Gly Len Val Asn Gly Thr Ala Val 285
	2042	Gly Leu Val Asn Gly III 280 275 275 ctg cac gat tcg cac atg ctc tcg ctc tcg cag gcc ttg acg gct ctg cac gat tcg cac atg ctc tcg ctc tcg cag gcc ttg acg gct ctg cac gat tcg cac atg ctc tcg ctc tcg cag gcc ttg acg gct ctg cac gac tcg cac atg ctc tcg ctc ctc tcg cag gcc ttg acg gct ctg cac gac tcg cac atg ctc tcg ctc ctc tcg cag gcc ttg acg gct ctg cac gac tcg cac atg ctc tcg ctc ctc tcg cag gcc ttg acg gct ctg cac gac tcg cac atg ctc tcg ctc ctc tcg cag gcc ttg acg gct ctg cac gac tcg cac atg ctc tcg ctc ctc tcg cag gcc ttg acg gct ctg cac gac tcg cac atg ctc tcg ctc ctc tcg cag gcc ttg acg gct ctg cac gac tcg cac atg ctc tcg ctc ctc tcg cag gcc ttg acg gct ctg cac gac tcg cac atg ctc tcg ctc ctc tcg cag gcc ttg acg gcc tcg ctc ctc ctcg cac gcc tcg cac atg ctc tcg cac atg c
	2043	275 ctg cac gac tog cac atg ctc tog ctc tot cag ag gcc tig des 9 ctg cac gac tog cac atg ctc tog ctc ser Gin Ala Leu Thr Ala Leu His Asp Ser His Met Leu Ser Leu Leu Ser Gin Ala Leu Thr Ala Leu His Asp Ser His Met Leu Ser Leu Cac trag ttc gcg ccg ttc 1127
	2044	Lev His Asp Ser His Met Leu Ser Leu bed 300
	2045	Leu His Asp 3295 295 are ggg tcg ttc ggg ccg ttc 1127
	2046	Leu His Asp Ser HIS Wet 295 290 290 290 290 201 290 290 202 203 204 205 205 207 207 208 208 208 208 208 208 208 208 208 208
	2047	290 ctc acg gtg gag gcc atg gtc ggc cag cag ggc tcg ttc gtc ggc gcg ctc acg gtg gag gcc atg gtc ggc gcc atg gtc gag gcc gcc 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gly Ser Phe Ala Pro Phe Leu Thr Val Glu Ala Met Val Gly Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln Gln Gln Gly Ser Phe Ala Pro Phe 320 Leu Thr Val Glu Ala Met Val Gly Gln
	2048	Leu Thr Val Glu Ala Met Val 315
	2049	305 ata tac cac cac cac age cay val Glu val Ala Arg
	2050	Leu Thr val Glu Ala Met val Glu Sala Met val Glu Sala Met val Glu Sala Met val Glu Val Ala Arg atc cac gac gtc gtc gtc gtc gtc gtc gtc gtc gtc gt
	2051	The His Asp var 12
	2052	ot ctt tee gge teg teg til ale val Glu His Glu
	2053	aac atc cgc acg Lou Leu Ser Gly Ser Ser Pne Ala 141
	2054	Asn Ile Arg Int Sec 345
	2055	340 atc and gac gac gag ggc att to Arg Gln Asp Arg
	2056	gag gag gtc aag gtc tag asp Asp Glu Gly IIe Leu Alg
	2057	gag gag gtc aag gtc aag gac gac gag ggc att ett ege cay 350 Glu Glu Val Lys Val Lys Asp Asp Glu Gly Ile Leu Arg Gln Asp Arg Glu Glu Val Lys Val Lys Asp Asp Glu Gly Ile Leu Arg Gln Asp Arg 360
	2058	- and tog get cag gttegteded teets
	2059	tac ecg etc ege acg ecg Pro Gln Tyr Pro Leu Arg Thr Ser Pro Gln 375 375 375 375 375
	2060	Tyr Pro Leu Arg Thr Ser Pro 375
	2061	Tyr Pro Leu Arg Thr Sel 375 370 370 tccgaccagg gcgtcgagac ttacgttttg cgtatccag ttc ctc ggc ccg ctc phe Leu Gly Pro Leu sel 270 1379 1379 1379 1379
	2062	toogacoggo gogtogagae 11 ppe Bed 11 380
	2063	- and aac aac 142/
	2064	atg cac gee tac teg act etc teg Cor Leu Glu Asn Asn
	2065	gtg gag gac atg dat Wis Ala Tyr Ser Thr Leu Ser Leu 395
	2066	Val Giu Asp Mcc 390 - gag acc qcq 14/3
	2067	383 ac ccg ctc ctc gac gtc gag ac Lvs Gln Thr Ala
	2068	acg acg acc gac acc pro Leu Leu Asp Val Glu Ash Bio
	2069	Thr Thr Thr Asp 405
	2070	400 as the cag ged teg get gte teg att Ser Met Glu Lys
	2071	cac ggc ggc dat the Phe Gln Ala Ser Ala Vai Ser 125
	2072	400 cac ggc ggc aac ttc cag gcg tcg gct gtc tcg att tcg at tcg cac ggc ggc aac ttc cag gcg tcg gct at tcg att tcg cac ggc ggc aac ttc cag gcg tag Sgr Ala Val Ser Ile Ser Met Glu Lys His Gly Gly Asn Phe Gln Ala Ser Ala Val Ser Ile Ser Met Glu Lys His Gly Gly Asn Phe Gln Ala Ser Ala Val Ser Itagactgaa tgttcttctc 1579
	2073	
	2074	acc agg tgcgccccc s
	2075	
	207	6 430 The gea ctc qcc ctc atc ggc and ctc Man Phe Thr Gln Cys
	207	440 Leu Ala Leu Ala Leu He Gly Lys Leu Asa Phe Thr Gln Cys Leu Ala Leu He Gly Lys Leu Asa Phe Thr Gln Cys 440 Leu Ala
	207	8 435 and grant training the cts 1670
	207	B Leu Ala Leu Ala Leu Ala Leu 440 440 440 440 440 440 440 440 440 44
	208	o acc gag ttg ctc aac gct gcc atg aac cgc ggc ctg cct tcg cs ce co o acc gag ttg ctc aac gct gcc atg aac cgc ggc ctg ccc tcg cs ce co o acc gag ttg ctc aac gcc ttg cs cs cac gag gcc ttg cs cs cac gag ggc ttg gac att 1724
	208	Thr Glu Leu Leu Asn Ala and 455 455 450 450 450 450 450 450 450 450
	208	450 450 age dag gac ecg teg etc aac tat eac ggc aag ggc teg sag gac ecg teg etc aac tat eac ggc aag ggc teg sag file 475 475 Ala Ala Glu Asp Pro Ser Leu Asn Tyr His Gly Lys Gly Leu Asp Fle 475 Ala Ala Glu Asp Pro Ser Leu Asn Tyr His Gly Lys Ggcgttette geographic 1778
	208	gct gcc gay gac say Ala Ala Glu Asp Pro Ser Leu Asn Tyr HIS Gly Die 475
	208	Ala Ala Ala Giu ASP 17- 470 aggit gacgttetec geogregete 1//8
	20	
	20	86 cac atc you you are

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	Output Set: N:\CRF3\01232002\1333
2087 2088	His Ile Ala Ala Tyr Ala Ser Glu 485 480 gtccccttca gcgcacccag gctgacttcc tttccctctg tag ctc ggc cac ctt Leu Gly His Leu 200 gag atg ggc aac cag 1881
2090	gccccttca gcgcacccag gccygctor. Leu Gly Alb Zacccag gcgcagagagagagagagagagagagagagaga
2092 2093 2094	Ala Asn pro var 1111 Ans
2095 2096	
2097 2098	Ala Val Asis Set
2099	Asn Asp Val Leu Ser Leu 525 aatagcgact gactgcgcga tcctgagcag ctt ctc gcc tcg cac ctg tac tgc 2031 Leu Leu Ala Ser His Leu Tyr Cys Leu Leu Ala Ser His Leu Tyr Cys 535
2101 2102 2103	530 - ++c aac aac 20/9
2104 2105 2106	Thr Leu Gin Aid 545 at a gar act 212/
2107 2108 2109	Gin Phe Asp Fig 267 560 and ctc aac 21/5
2110 2111 2112	ggc ctc gac gtc aac gca ctt gcg ctc gag gtc aag aag gcg ctc ggc ctc gac gtc aac gca ctt gcg ctc gag gtc aag aag gcg ctc g1y Leu Asp Val Asn Ala Leu Ala Leu Glu Val Lys 575 570 aag cgt ctc gag cag acg acg acg acg cac gag ccg cgc ttg cac Lys Arg Leu Glu Gln Thr Thr Thr Tyr Asp Leu Glu Pro Arg Trp His 595 590 2271
2113 2114 2115	Lys Arg Leu Glu Gln Thr Thr 111 172 555 595 590 590 585 585 615 Asp Ala Phe Ser Tyr Ala Thr Gly Thr Val Val Glu Leu Leu Ser Ser Asp Ala Phe Ser Tyr Ala Thr Gly Thr Val Val Glu Leu Leu Ser Ser Asp Ala Phe Ser Tyr Ala Thr Gly Thr Val Val Glu Leu Leu Ser Ser Asp Ala Phe Ser Tyr Ala Thr Gly Thr Val Val Glu Leu Leu Ser Ser Asp Ala Phe Ser Tyr Ala Thr Gly Thr Val Val Glu Leu Leu Ser Ser Glu Leu Leu Ser Ser Asp Ala Phe Ser Tyr Ala Thr Gly Thr Val Val Glu Leu Leu Ser Ser Asp Ala Thr Carlon Thr Val Val Glu Leu Leu Ser Ser Asp Ala Thr Carlon Thr Val Val Glu Leu Leu Ser Ser Asp Ala Thr Carlon Thr Val Val Glu Leu Leu Ser Ser Asp Ala Thr Carlo
2116 2117 2118	Asp Ala Phe Ser Tyr Ala Thr Gry 605 605 606 600 605 605 605 605 605 605
2119 2120 2121 2122	Ser Pro Ser And 625 620 625 620 get acc cgc 236/ get teg get gag aaa get atc teg etc acg ege gag gtg ege aac ege 236/ get teg get gag aaa get atc teg etc acg ege gag gtg ege aac ege 236/
2123 2124 2125	Ala Ser Ala Gra 11 640 635 ttc tgg cag acg ccg tct tcg cag gcg ccg gcg cac gca tac ctc tcg 2415 ttc tgg cag acg ccg tct tcg cag gcg ccg gcg cac gca tac ctc tcg 2415 ttc tgg cag acg ccg tct tcg cag gcg ccg gcg cac gca tac ctc tcg 2415
2126 2127	Phe Trp GHI III 655 650 650 650 650 650 650 650 650 650
2128 2129 213	Pro Arg Thr Arg 670 670 670 670 670 670 670 670 670 670
213 213 213 213 213 213	2 Gln Ala Arg Arg 30 685 686 690 690 690 690 690 690 690 690 690 69

RAW SEQUENCE LISTING

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	Output Set: N:\CRF3\V12320V2\-	2606
2138 2139 2140	aac cac gtc ctc gtc aag atg ctc gcg taaggcccga gcaagcctcg Asn His Val Leu Val Lys Met Leu Ala 720 720 cctagaaggc cgcctcaacc caagaccagc ttttcgacgt cgtgtcgtgc caagaacgga ctttcctcca tacacatgtc gtcttactct ctcgccgtca tcacgtctct cagttcttc gtatcccgcg tctct	2666 2726 2741

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L:61 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:79 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:197 M:283 W: Missing Blank Line separator, <220> field identifier
L:252 M:341 W: (46) "n" or "xaa" used, for SEQ ID#:12
L:416 M:283 W: Missing Blank Line separator, <400> field identifier
L:444 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:1622 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:1022 m:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:1626 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
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L:1630 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:1632 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
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   L:1678 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
   L:1680 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
   L:1682 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
   L:1684 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
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L:1733 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
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L:1738 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:1739 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:21
L:1906 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:26
L:1907 M:283 W: Missing Blank Line separator, <220> field identifier
L:1909 M:283 W: Missing Blank Line separator, <400> field identifier
L:1914 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:27
L:1915 M:283 W: Missing Blank Line separator, <220> field identifier
L:1917 M:283 W: Missing Blank Line separator, <400> field identifier
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  L:1975 M:283 W: Missing Blank Line separator, <220> field identifier
  L:1979 M:283 W: Missing Blank Line separator, <220> field identifier
  L:1983 M:283 W: Missing Blank Line separator, <400> field identifier
  L:1986 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
  L:1986 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:6
  L:1987 M:361 W: Invalid Split Codon, Sequence data for SEQ ID#: 28
  L:1988 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
  L:1991 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
  L:1994 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
   L:1997 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
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   L:2006 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
   L:2010 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
   L:2013 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
   L:2016 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
   L:2019 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
   L:2022 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
   L:2025 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
    L:2028 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
    L:2031 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
    L:2034 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
    L:2038 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:28
    L:2040 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ 1D:28
    L:2148 M:283 W: Missing Blank Line separator, <220> field identifier
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Input Set : A:\500nscseq.txt

Output Set: N:\CRF3\01232002\1939408A.raw

Out-F		
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